

Goddard's Software Process Improvement Project

**ISD All Hands Meeting
July 2005**

Sally Godfrey, Sanjeev Sharma, Mike Stark

Progress Notes

- **We are planning a Class B appraisal for Flight Software in September and a rated appraisal for CMMI Level 2 in January**
- **We will be working with other mission software projects in ISD shortly: Goal is CMMI Level 2 by end of FY06**
- **Many new assets in place-----BEGIN USING THEM!**
 - **New Status Reporting Template**
 - **New Templates for Product Plans (Class B/C should be on web site by next week)**
 - **New measurement requirements**
- **Have started CMMI awareness sessions (Software Engineering Discussions)**

Training Team Highlights

- **Held 8 'Awareness' sessions since April/'05. Many more are planned through the end of CY '05.**
- **Over ~250 people have attended to date representing 25 branches at GSFC and WFF.**
- **Working with a multi-organizational team (GSFC Civil Servants and contractors) to deploy training.**

Training Team Highlights

- **Topics presented:**
 - **10 Elements of Improved SW Development**
 - **Configuration Management**
 - **Software Assurance and the Practitioner**
 - **Measurement & Analysis for ISD SW Projects**
 - **Getting to CMMI ML 2: What You Need to Know**
 - **The GSFC SW Development Process Website Overview**
 - **ISD SW Process Overview**
 - **Stakeholder Coordination**
- **Many other topics are being developed - Watch for announcements!**

Training Team Highlights

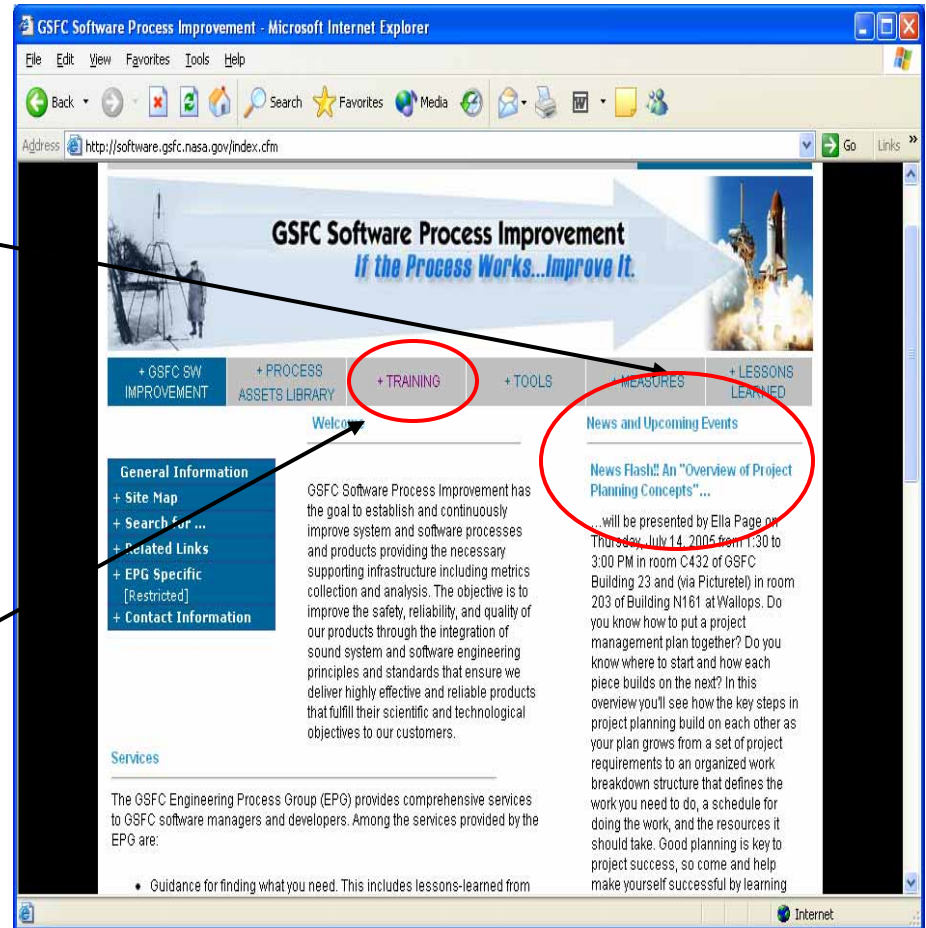
- **Collecting attendance and comments at each session --- the latter to elicit attendee feedback and to ultimately help improve future deployments.**
 - Sessions are designed to satisfy CMMI training requirements
 - Attendance lists will be recorded with GSFC

- **Long-term goal is to provide a curriculum based training system from which personnel can select tracks that support/enhance assignments.**

Training Team Highlights

- The **SPI Main page** displays the latest training offering including date/time/location/presenter.

- From the GSFC SPI page, select **Training**



Training Team Highlights

- To access slides from past awareness sessions and other helpful presentations, select **Training Program** and **On-line Slides**

GSFC's EPG Training Program - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://software.gsfc.nasa.gov/training.cfm> Go Links

NASA GODDARD SPACE FLIGHT CENTER GSFC Software Process Improvement If the Process Works... Improve It.

+ GSFC SW IMPROVEMENT + PROCESS ASSETS LIBRARY - (FAS) + TRAINING + TOOLS + MEASURES + LESSONS LEARNED

Training Program S/W Classes Calendar Software Training Program

S/W Eng. Discussions List of Classes

Conferences Training by Role

Ask an expert On-line Slides

Training Support Certification Info.

Training Links

Software Training Program are to identify, document, and deploy software engineering on GSFC projects; to provide awareness of software engineering issues to GSFC customers and collaborators; to enhance software engineering skills of GSFC employees; to ensure compliance of NPR 7150.2 across the GSFC. To achieve these goals, the training techniques employed include training classes, software awareness discussions, mentoring, on-the-job training, conference attendance, and use of experts.

This site is the repository for software training-related materials. It provides news and information on upcoming events related to software training, access to the most recent Software Training Plan, and links to other relevant information (training calendar, on-line slides, etc.).

ISD Software Training plan Or in PDF

Training News

[See S/W Engineering Discussions schedule below]

News Flash!! An "Overview of Project Planning Concepts" ...

...will be presented by Ella Page on Thursday, July 14, 2005 from 1:30 to 3:00 PM in room C432 of GSFC Building 23 and (via Picturetel) in room 203 of Building N161 at Wallops. Do you know

<http://software.gsfc.nasa.gov/oltraining.cfm?categoryid=1.5> Internet

Training Team Highlights









- The resulting page displays useful presentations e.g. **Quantitative Software Management**.
- These slides can be downloaded.

GSFC's On-Line Training - Microsoft Internet Explorer

Address <http://software.gsfc.nasa.gov/oltraining.cfm?categoryid=1.5>

On-Line Slides

The on-line presentations shown on this page are available in one or more of the following formats: MS Office (PowerPoint); PDF (viewable with Adobe Reader), and HTML (web pages). To view an on-line presentation, click the icon for the format that is available or, if multiple icons are shown, for the format you prefer. Presentations with a PowerPoint icon may be downloaded as well as viewed on-line.

Course #	Title/Description	Instructor	Status	MS Office Version	PDF Version	HTML Version
	NASA Software Safety Standard An excellent overview of the new NASA Software Safety Standard	Cynthia Calhoun	ON-LINE			
	CMMI Today and Process Maturity Profile Presentation by Mike Phillips, SEI, Monday, Jan. 26, 2004.	Mike Phillips	ON-LINE			HTML
	CMMI Version 1.1 Tutorial Presentation by Mike Phillips, CMMI Program Manager, at the European SEPG Conference, April 2002. Revised February 2004.	Mike Phillips	ON-LINE			HTML
	What is CMMI? Brief overview of CMMI. PowerPoint presentation.	Sally Godfrey	ON-LINE			
GSFC003	Using CMMI for Improvement at GSFC	Sally Godfrey	ON-LINE			

Training Team Highlights

- To view the **Discussion Schedule**, select **SW Eng. Discussions**
- Or you can view the **Slide Archives** to view previous Awareness sessions' slides

GSFC's EPG Training Program - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://software.gsfc.nasa.gov/training.cfm>

NASA GODDARD SPACE FLIGHT CENTER GSFC Software Process Improvement If the Process Works... Improve It.

+ GSFC SW IMPROVEMENT + PROCESS ASSETS LIBRARY - (PAL) + TRAINING + TOOLS + MEASURES + LESSONS LEARNED

Training Program

SW Eng. Discussions Discussions Schedule

Conferences Slides Archive

Ask an expert

Training Support

Training Links

GSFC Software Training Program

Software Training Program are to identify, document, and deploy proven best practices for software engineering on GSFC projects; to provide awareness of key software development issues to GSFC customers and collaborators; to enhance the skills of GSFC developers and team leads; and to ensure compliance of NPR 7150.2 across the GSFC. To achieve these goals, the training techniques employed include training classes, software awareness discussions, mentoring, on-the-job training, conference attendance, and use of experts.

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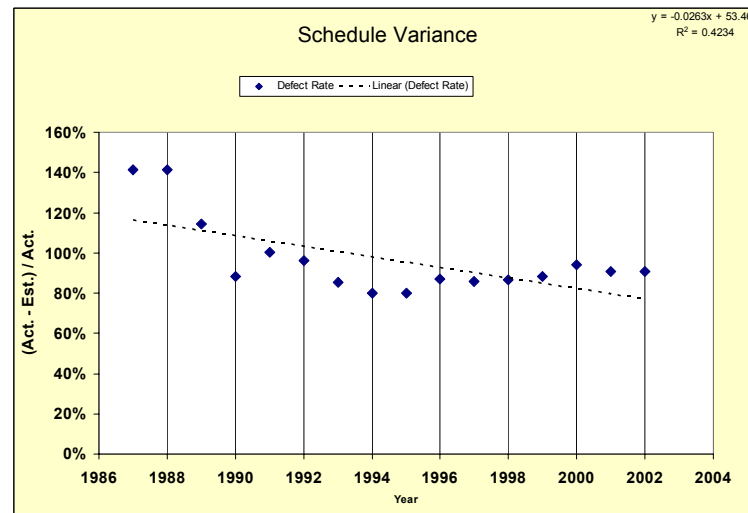
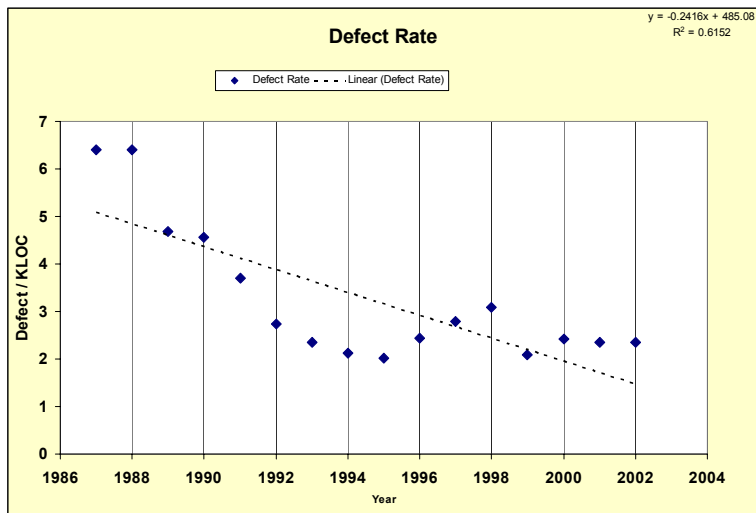
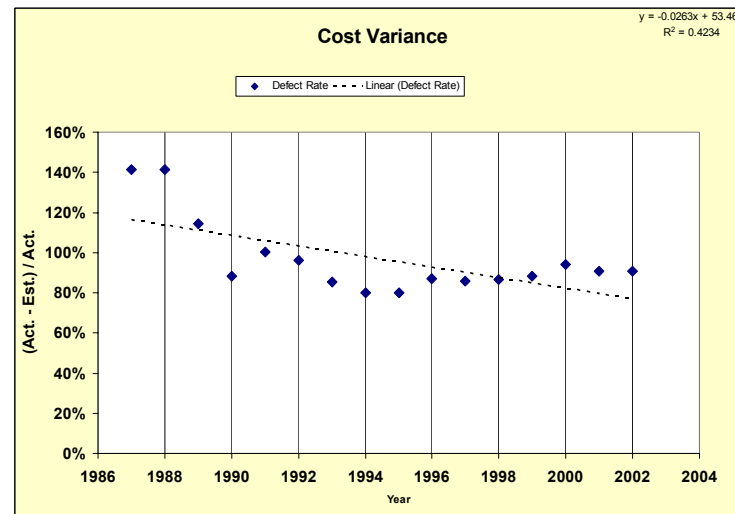
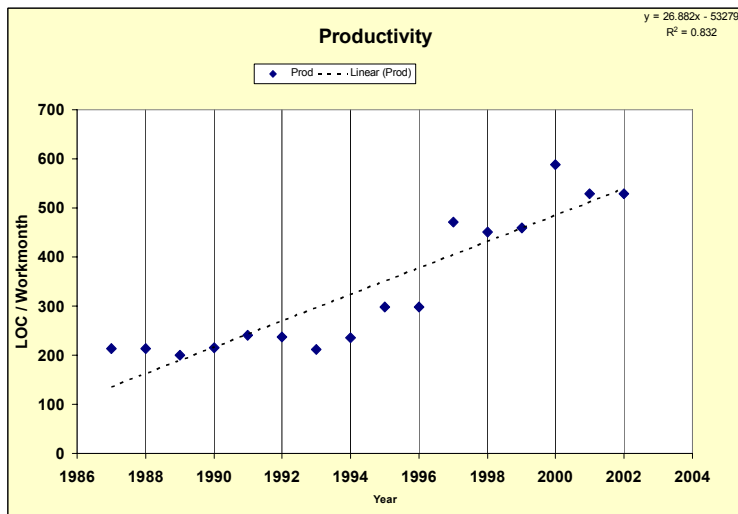
<http://software.gsfc.nasa.gov/swengdisc.cfm>

ISD Measurement Program

- **Why an ISD measurement program?**
 - **Analyze across multiple projects to**
 - Describe trends in ISD performance
 - Assess changes in processes or technologies
 - Create experience-based planning models
 - **Provide services to software teams**
 - **Who provides data for this program?**
 - **Mission software teams**
 - **Teams where initial estimate is 5 SY or more**
- <http://software.gsfc.nasa.gov/metrics.htm>**

Describing key trends

(Productivity, Defect Rate, Cost Variance, Schedule Variance)



ISD Collection Spreadsheet: Milestone Data

Project Acronym

Current Date

Event:	Start	SRR	PDR	CDR	Start Test	End Test	Maint.
Basis of Estimate Provided (Y/N)							

Estimated and Actual Milestone Dates

System Requirements Review							
Preliminary Design Review							
Critical Design Review							
Start of System Testing							
Acceptance Test End							
Turnover to Maintenance							

Progress points (from point counting)

Actual at milestone							
Estimated at completion							

Effort (expressed as FTEs)

Actual at milestone							
Estimated at completion							

Requirements Data

Number of requirements							
Number of TBDs							
Cumulative changed requirements							

Cumulative Defects

critical defects found							
moderate defects found							
minor defects found							

Color Coding Key

Gray fill = actual values -	
White fill = estimates -	

ISD Measurement Team Services

- **Setting up ISD-level data collection**
 - Tailor spreadsheet to a specific project
- **Products available via Web site**
 - <http://software.gsfc.nasa.gov/MeasProj.htm>
 - “Help desk” support for these products
- **Consulting services**
 - Oriented towards helping projects set up and run their measurement program
 - These services are *offered*, not mandated

Summary

- **Software Process Improvement is NOT just for Flight Software!**
- **CMMI is NOT optional for mission software**
- **Begin using assets**
- **Attend awareness briefings – One on Project Planning this afternoon 1:30 pm, Bldg 23, C432**
- **Measurement collection for all included projects will start shortly (FSW has started)**
- **We can provide help, mentoring**
- **Visit the web site often: New assets are posted often:**
<http://software.gsfc.nasa.gov>